DOCUMENT RESUME

ED 202 953 UD 021 449

TITLE	Project ECO: Equal Career Opportunities for Bilingual High School Students. ESEA Title VII Final Evaluation Report, 1979-1980.
INSTITUTION	New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation.
SPONS AGENCY	Office of Bilingual Education and Minority Languages Affairs (ED), Washington, D.C.
BUREAU NO	5001-42-07651
PUB DATE	80
GRANT	G007905248
NOTE	85p.: For related documents, see ED 199 368-375, ED 200 693-705, UD 021 377-378, UD 021 380-381, UD 021 383-386, UD 021 436, and UD 021 446-452.
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Basic Skills; *Bilingual Education; *Career Education; Curriculum Development; *English (Second Language); *Haitian Creole; Program Effectiveness; Program Evaluation; Secondary Education; *Spanish; Staff Development
IDENTIFIERS	Elementary Secondary Education Act Title VII; *Limited English Speaking; New York (New York)

ABSTRACT

This is an evaluation of the Equal Career Opportunities Program conducted for bilingual high school students in New York City in 1979-1980. The program served Spanish and French/Creole speaking students, and was designed to provide effective bilingual instruction in basic skills, career education, and preoccupational training. Its goal was to prepare participating students to take an active part in the career decision making process. The evaluation provides information on the program's goals and organization. Tables show results on the Criterion Referenced English Syntax Test, as well as on tests measuring achievement in mathematics, social studies, science, native language arts, native language reading, and English language ability. Results of a questionnaire on student attitudes toward native cultures and education are appended. Attendance rates are given and conclusions and recommendations are offered. (Author/APM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED202953

OEE Evaluation Report

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
R. Edmonds
NYC Public Schools
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FINAL EVALUATION REPORT

ESEA Title VII

Grant Number: G007905248

Project Number: 5001-42-07651

PROJECT ECO:

EQUAL CAREER OPPORTUNITIES

FOR BILINGUAL HIGH SCHOOL STUDENTS

1979-1980

Project Director: Angelo Gatto

Prepared By The

BILINGUAL EDUCATION EVALUATION UNIT

Ruddie A. Irizarry, Manager
Judith A. Torres, Evaluation Specialist
Juanita Johnson Mendez, Consultant
Frank O'Brien, Ph.D., Consultant

LDO 21446

NEW YORK CITY PUBLIC SCHOOLS
OFFICE OF EDUCATIONAL EVALUATION
RICHARD GUTTENBERG, ADMINISTRATOR

TABLE OF CONTENTS

	PAGE
Introduction	1
Project Goals and Objectives	2
Program Organization	2
Central Personnel	2
Site Personnel	3
Site Selection	4
Site Variation	5
Central Program - Site Interaction	6
Inter-site Interaction	7
Criteria for Student Selection	7
Activities Provided By Project ECO	8
Instructional Program	9
English	9
Native Language Arts and the Content Areas	10
Staff Development	14
Supportive Services to Students	14
Services to Parents	14
Assessment Procedures and Findings	15
Assessment Procedures and Instruments	15
Evaluation Objectives and Summary of Student Outcomes	50
Conclusions and Recommendations	56
Appendices	61

LIST OF CHARTS AND TABLES

CHARTS

		PAGE
CHART I	Organizing Threads	8
CHART II	Plan for Individualizing Instruction	13

TABLES

Table I	Title VIII - Funded Staff Positions, by Site	3
Table II	Selected Characteristics, Participating Schools, Project ECO, 1979-1980	5
Table III	Instructional Program, John F. Kennedy High School	11
Table IV	Instructional Program, Andrew Jackson and Samuel J. Tilden High Schools	12
Table V	Results of the CREST Reporting and Number and Percent of Objectives Mastered (French/Creole Speaking Students, Fall, Title I)	18
Table VI	Student Performance on the CREST by Test Level and Grade (French/Creole Speaking Students, Fall, Title I)	19
Table VII	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Spanish Speaking Students, Fall, Title I)	20
Table VIII	Student Performance on the CREST by Test Level and Grade (Spanish Speaking Students, Fall, Title I)	21
Table IX	Results of the CREST Reporting the Number and Percent of Objectives Mastered (French/Creole Speaking Students, Spring, Title I)	22
Table X	Student Performance on the CREST by Test Level and Grade (French/Creole Speaking Students, Spring, Title I)	23
Table XI	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Spanish Speaking Students, Spring, Title I)	24
Table XII	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Spanish Speaking Students, Spring, Title I)	25

TABLES
(Continued)

		PAGE
Table XIII	English Language Achievement (French/Creole Speaking Students, Non Title I)	26
Table XIV	Native Language Reading Achievement (Andrew Jackson High School, French/Creole Speaking Students)	29
Table XV	Native Language Reading Achievement (Samuel J. Tilden High School, French/Creole Speaking Students)	30
Table XVI	Mathematics Achievement (Andrew Jackson High School, French/Creole Speaking Students)	31
Table XVII	Mathematics Achievement (Samuel J. Tilden High School, French/Creole Speaking Students)	32
Table XVIII	Mathematics Achievement (John F. Kennedy High School, Spanish Speaking Students)	33
Table XIX	Science Achievement (Andrew Jackson High School, French/Creole Speaking Students)	34
Table XX	Science Achievement (Samuel J. Tilden High School, French/Creole Speaking Students)	35
Table XXI	Science Achievement (John F. Kennedy High School, Spanish Speaking Students)	36
Table XXII	Social Studies Achievement (Andrew Jackson High School, French/Creole Speaking Students)	37
Table XXIII	Social Studies Achievement (Samuel J. Tilden High School, French/Creole Speaking Students)	38
Table XXIV	Social Studies Achievement (John F. Kennedy High School, Spanish Speaking Students)	39
Table XXV	Native Language Arts Achievement (John F. Kennedy High School, Spanish Speaking Students)	40
Table XXVI	Attitude Towards Native Culture (Andrew Jackson High School, French/Creole Speaking Students)	41
Table XXVII	Attitude Towards Native Culture (Samuel J. Tilden High School, French/Creole Speaking Students)	42

TABLES
(Continued)

		PAGE
Table XXVIII	Attitude Towards Native Culture (John F. Kennedy High School, Spanish Speaking Students)	43
Table XXIX	Attitude Towards Education (Andrew Jackson High School, French/Creole Speaking Students)	44
Table XXX	Attitude Towards Education (Samuel J. Tilden High School, French/Creole Speaking Students)	45
Table XXXI	Attitude Towards Education (John F. Kennedy High School, Spanish Speaking Students)	46
Table XXXII	Attendance Rates (Andrew Jackson High School, French/ Creole Speaking Students)	47
Table XXXIII	Attendance Rates (Samuel J. Tilden High School, French/ Creole Speaking Students)	48
Table XXXIV	Attendance Rates (John F. Kennedy High School, Spanish Speaking Students)	49
Table XXXV	Average Difference Between Initial and Final Ratings of Student Behavior	55

TITLE: Project ECO

CENTRAL ADDRESS: 442 East Houston Street
New York, New York 10022

COORDINATOR: Angelo Gatto

PARTICIPATING SITES:

	Target Language	Number of Students Served
John F. Kennedy High School Bronx, New York	Spanish	150
Andrew Jackson High School Queens, New York	French/Creole	100
Samuel J. Tilden High School Brooklyn, New York	French/Creole	150

TOTAL STUDENTS SERVED: 400

GRADES SERVED: 9, 10 and 11

YEAR OF FUNDING: First Year of a 2 Year Cycle

Introduction

Project ECO has been funded for operation during the period of time between October 1, 1979 and September 30, 1980. This project is a multi-site program with its central office being housed at 442 East Houston Street, New York, New York 10022 as of May 7, 1980. Prior to this time the central office was located at 500 Pacific Street, Brooklyn, New York 10007.

The following three sites have functioned throughout the program year:

School	Target Language	Number of Students Served
John F. Kennedy High School Bronx, New York	Spanish	150
Andrew Jackson High School Queens, New York	French/Creole	100
Samuel J. Tilden High School Brooklyn, New York	French/Creole	150

The ECO Project worked to supplement the already existing Bilingual Programs under the Foreign Language Departments in those schools.

Project Goals and Objectives

Project ECO was designed to provide effective bilingual instruction in basic skills, career education and preoccupational training. Its goal is to prepare each participating bilingual student to take an active part in the career decision making process. Along with these goals which have been stated as the projects primary goals, staff members through interviews have stated a number of additional goals. The program is intended to call attention to careers that have traditionally eluded minority students. The areas of concentration include Science for Health Careers, Law and Pre-Law, and Political Science. A major function of the program, through necessity, became constructing bilingual materials where none existed.

Project ECO's goals and objectives can be divided into two groups - one that promotes development of basic skills, and a second that focuses specifically on enlarging career patterns for the target group. Since this is the project's first year of operation most of the activities have centered around the implementation of the program and the development of basic skills. Towards the achievement of the instructional objectives the project activities were enmeshed with the general activities of each school's bilingual programs.

Program Organization

Central Personnel. The full-time staff employed in this project includes a director, an assistant director and a secretary.

The project director provided overall administration and supervision of the project. His responsibilities included interviewing and hiring of staff, providing orientation and training of staff (regarding job responsibilities), preparation of the budget, preparation of the instructional aide payroll, holding conferences with principals and assistant principals. An assistant director/field coordinator aids the director in carrying out the above-mentioned duties. Additionally, field supervision was a major responsibility of the assistant director. A centrally based secretary worked full-time, performing all clerical and secretarial functions for the project office.

Site Personnel. Project ECO funds curriculum specialists and some supportive services at each site. In addition to the Title VII personnel, each site has tax levy staff members providing coordination, instructional and other services to students of limited English proficiency. At each site, the foreign language department head was the contact person between Project ECO and the site.

TABLE I

Title VII - Funded Staff Positions, by Site

School:	John F. Kennedy	Andrew Jackson	Samuel J. Tilden
	1 Curriculum Specialist	1 Curriculum Specialist	1 Grade Advisor
	2 Instructional Aides	2 Instructional Aides	1 Curriculum Specialist
	1 Family Assistant	1 Family Assistant	1 Family Assistant
	2 Student Aides	1 Student Aide	

Project ECO was funded to provide 3 instructional aides per site; however, there were openings for six during the project year. Project personnel felt that the incentives offered for these positions made it difficult to fill them with qualified speakers of the target languages.

Site Selection

The following criteria were used in selecting the sites for participation in the program:

1. There was a substantial bilingual population in the community;
2. There was an identified need for supplementary funding;
3. The district or site had not previously received Title VII funding, or had a population which was previously underserved.

All of the sites are located in middle income areas, however, all students participating in the program are Title I eligible. Two additional sites had been selected to participate in the project, but for various reasons were withdrawn.

Site Variation

The three sites differ in a number of their characteristics. Table II presents the ethnic composition, the school register, percentage of low-income children, and schoolwide attendance data for each site. As may be seen, John F. Kennedy High School has a fairly balanced population of Hispanic, Black and White students. Samuel J. Tilden is predominantly White, with a large percentage of Black and smaller number of Hispanic students. Andrew Jackson has a student population which is overwhelmingly Black in composition. According to Title I data, almost half of the Kennedy students were reported to be from low-income families. Approximately 12% of Tilden students were considered low-income, as were almost 83% of Jackson students. The ethnic survey fails to distinguish between Blacks

TABLE II

SELECTED CHARACTERISTICS, PARTICIPATING SCHOOLS, PROJECT ECO, 1979-1980

CATEGORY	JOHN F. KENNEDY (X)	SAMUEL J. TILDEN (B)	ANDREW JACKSON (Q)
ETHNIC COMPOSITION (AS OF 10/31/79)	AM. INDIAN 0.1% ASIAN 3.7% HISPANIC 36.7% BLACK 32.5% WHITE 27.0% TOTAL POP. 5253	AM. INDIAN 0.0% ASIAN 2.2% HISPANIC 10.9% BLACK 31.3% WHITE 55.6% TOTAL POP. 2849	AM. INDIAN 0.0% ASIAN 0.1% HISPANIC 1.1% BLACK 98.7% WHITE 0.0% TOTAL POP. 3463
POVERTY COMPONENTS:			
Free Lunch Eligible	2,413	371	862
Low Income Children	2,447	316	2,049
Register, 1980-81	5,080	2,699	2,472
Percent, Low-Income Children	48.19	11.75	82.92
ATTENDANCE DATA 1978-1979			
Avg. Register	4,747	2,817	2,493
Percent Attendance	76.01	81.90	78.02

Sources: Office of Educational Statistics, NYC Public Schools. Annual School Census 10/31/79
Metropolitan Educational Laboratory, NYC Public Schools (Title I Information 1980-81).

and Hispanics born in the United States from those born in the Caribbean. This distinction undoubtedly further subdivides the student populations at each site. At Jackson and Tilden, the target population is composed of Creole and French-speaking Haitians, while at Kennedy, the population served is Hispanic.

The career focus of Project ECO is different at each site, as follows:

John F. Kennedy	Health Careers
Andrew Jackson	Law and Pre-Law
Samuel J. Tilden	Business

The career orientation had been selected by the individual schools prior to the inception of Project ECO.

Finally, as the program at each site is coordinated with each Foreign Language Department respectively, differences in the emphases or characteristics of these departments may influence the implementation or activities of Project ECO at each participating school.

Central Program - Site Interaction

Based on an interview with the project director, central personnel provided the following services to each site:

On-site supervision-

- The project director visited each site approximately two times per month.
- The field coordinator conducted activities in the field two days per week.

Staff hiring and Orientation -

- Site staff was hired centrally, according to proposal guidelines.
- Delineation of site staff responsibilities was handled through central office orientation and training.

Administrative Functions -

- The budget was developed centrally.
- The instructional aide payroll is prepared by the director.
- Purchase orders are processed.
- Materials are xeroxed and distributed centrally.

Articulation with School Staff -

- Conferences with principals, assistant principals and unit heads are organized by the director.

Technical Assistance -

- Project ECO Information kit for staff and parents was developed centrally.
- Curriculum development is handled both centrally and locally.
- Relevant books and pamphlets are shared.

Inter-site Interaction

The sites operate basically independently of each other, although they share some common materials such as the Information Kit. Differences in target language and career focus as well as geographical distance between sites are partially responsible for limited intersite interaction.

Criteria for Student Selection

Students were selected from the bilingual population of the school according to the following eligibility criteria:

- All participating students scored below the 20th percentile on the English Version of the Language Assessment Battery (LAB).

- All students spoke the target language of the individual program.
- All students were recommended by teachers.
- The school schedule of each participating student allowed for full participation in Project ECO.
- All participating students were Title I eligible.

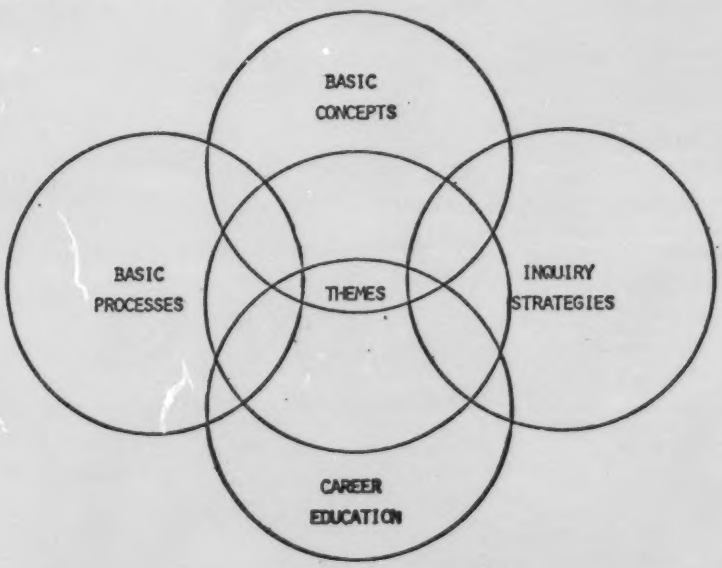
Students involved in Project ECO were previously receiving services through the bilingual programs in their respective high schools.

Activities Provided By Project ECO

As noted in the discussion of Project goals and objectives, while career education represents a significant aspect of Project ECO, it does not represent a completely separate instructional area. A majority of the stated goals and objectives focus on helping participating students to achieve basic linguistic and academic skills necessary for pursuing identified careers. Below is the schematic representation of interrelatedness of these areas of instruction (taken from Project ECO Information Kit, 1979-80).

CHART I

ORGANIZING THREADS



Instructional Program

Intensive English as a Second Language is offered to all students, as is instruction in native language arts (Spanish or Creole /French). Instruction in the content areas is taught bilingually, stressing basic skills and career development. Independent studies are stressed. One of the aims of Project ECO is also to individualize instruction, as classes tend to be composed of students of heterogeneous backgrounds. The following paragraphs describe the instructional program in English as it appeared in the project's Information Kit.

English. Intensive English instruction is one of the first priorities of Project ECO. Curricula in Applied English have been partially developed by the project Effective Transition of the Bilingual Student. Packets for individualized instruction will now be prepared to meet the students' needs in multi-level classes and allow each LEP person to progress at his/her own pace. Experience has demonstrated that the teaching of ESL should be integrated with the content areas as well as with the syllabus of Regular High School English courses to facilitate mainstreaming at grade 11 or 12, depending on readiness and achievement.

A diagnostic approach using the CREST* (Criterion Referenced English Syntax Test) developed by the New York City Board of Education will be used to determine placement at the appropriate level.

Instruction will be given by licensed, experienced ESL High School teachers assisted by instructor and student aides to guarantee a ratio of one to five in each ESL class.

Stress will be placed on proper intonation, pronunciation, acquisition of vocabulary and syntax. Reading, study and college skills will be taught systematically starting with Level I beginner.

The goal is true bilingualism, that is, near native proficiency in English will be acquired in three years or less.

Native Language Arts and the Content Areas. The following pages present the instructional offerings in these areas at each school. Also included are the number of periods a day in which each subject is taught, and the language of instruction. Observable is the integration of the career focus and content area instruction.

TABLE III

INSTRUCTIONAL PROGRAM

JOHN F. KENNEDY HIGH SCHOOL

Daily Class Schedule

9th Grade		Language Of Instruction
English As a Second Language	2 periods	English
Hispanic Literature/Native Reading Skills	1 period	Spanish
Social Studies/Int. Trade/Car Ed.	1 period	Spanish
Science and or Health Careers	1 period	Spanish
Mathematics and or Business skills Education	1 period	Spanish
Physical Education	1 period	English
Career Education/Typing	1 period	Spanish
Lunch	1 period	
Music and Art	1 period	English

10th Grade		
English As A Second Language	2 periods	English
Native Reading Skills/Commercial Spanish	1 period	Spanish
Social Studies/International Trade/Career Ed.	1 period	Spanish
Science/Health Careers	1 period	Spanish
Mathematics/Accounting	1 period	Spanish
Physical Education	1 period	English
Career Education/Medical Office Skills	1 period	Spanish
Lunch	1 period	
Music or Art	1 period	English

11th Grade		
English Language Skills	2 periods	English
Hispanic Literature/Native Reading Skills	1 period	Spanish
Social Studies/Law/Career Ed	1 period	Spanish
Mathematics/Computer Science	1 period	Spanish
Science/Health Careers	1 period	Spanish
Physical Education	1 period	English
Career Education/Office Skills	1 period	Spanish
Lunch	1 period	
Music or Art	1 period	English

* Instruction in the content areas and native language arts will be in Spanish.
Students will be programmed for a nine period day. One period = 40 minutes.

TABLE IV

INSTRUCTIONAL PROGRAM

ANDREW JACKSON AND SAMUEL J. TILDEN HIGH SCHOOLS

Daily Class Schedule

9th Grade		Language Of Instruction
English As a Second Language	2 periods	English
Haitian Literature/Native Reading Skills	1 period	French/Creole
Science/Health Careers	1 period	French/Creole
Physical Education	1 period	English
Mathematics/Business/Career Ed.	1 period	French/Creole
Social Studies/Law Enforcement	1 period	French/Creole
Lunch	1 period	
Art or Music	1 period	English
Career Orientation/Typing	1 period	French/Creole

10th Grade		
English As A Second Language	2 periods	English
Haitian Literature/Native Reading Skills	1 period	French/Creole
Science/Health Careers	1 period	French/Creole
Mathematics/Accounting/Career Ed	1 period	French/Creole
Social Studies/Economics	1 period	French/Creole
Physical Education	1 period	English
Lunch	1 period	
Career Orientation/Office Skills or Medical Skills	1 period	French/Creole
Art or Music	1 period	English

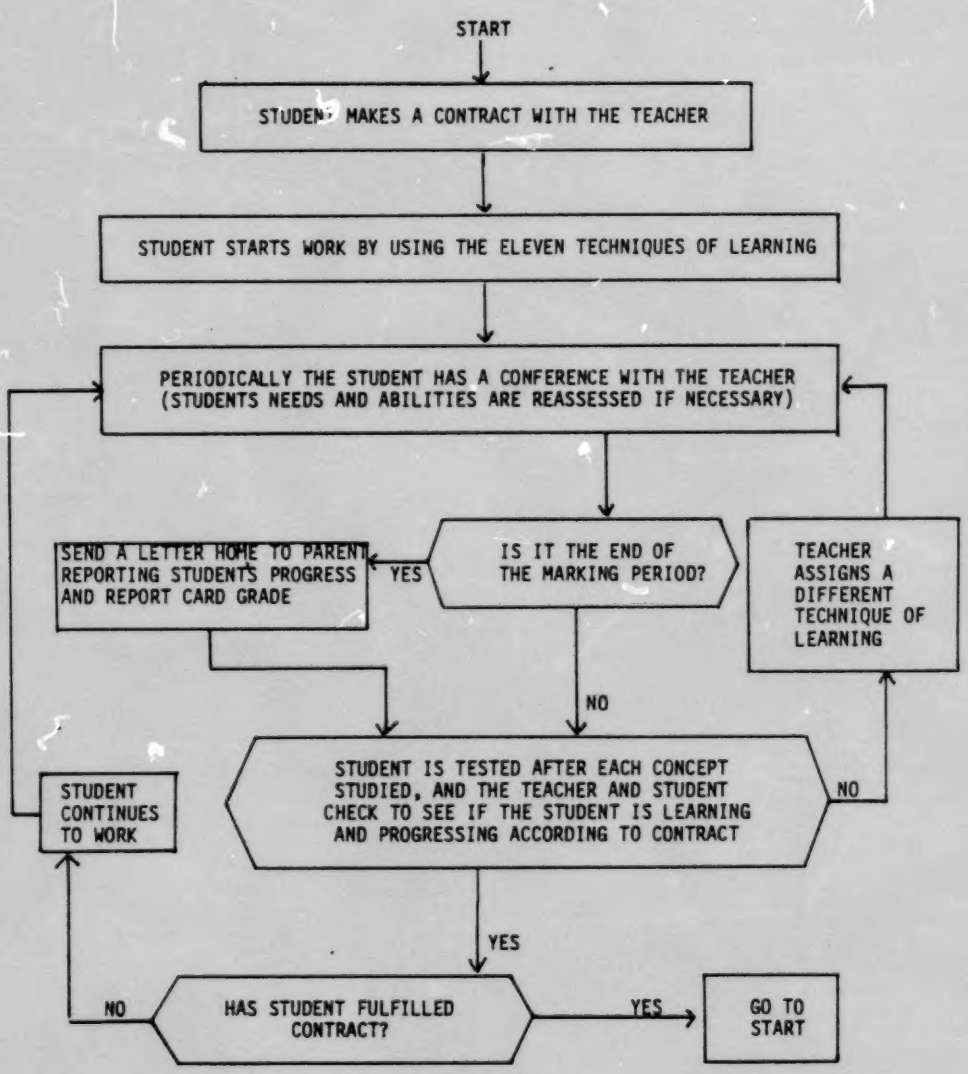
11th Grade		
English	2 periods	English
Speech	1 period	French/Creole
Haitian Literature/Native Reading Skills	1 period	French/Creole
Mathematics/Computer Science/Car Ed.	1 period	French/Creole
Science/Health Careers	1 period	French/Creole
Social Studies/Law Enforcement	1 period	French/Creole
Lunch	1 period	
Career Orientation/Typing	1 period	French/Creole
Art or Music	1 period	English

* Instruction in the content areas and native language arts will be in French/Creole.
Students will be programmed for a nine period day. One period = 40 minutes.

Individualization of instruction was one of the major stated emphases of the ECO project. Chart II diagrams the plan which was developed for individualizing instruction.

CHART II

PLAN FOR INDIVIDUALIZING INSTRUCTION


START
STUDENT MAKES A CONTRACT WITH THE TEACHER
STUDENT STARTS WORK BY USING THE ELEVEN TECHNIQUES OF LEARNING
PERIODICALLY THE STUDENT HAS A CONFERENCE WITH THE TEACHER (STUDENTS NEEDS AND ABILITIES ARE REASSESSED IF NECESSARY)
IS IT THE END OF THE MARKING PERIOD?
YES
SEND A LETTER HOME TO PARENT REPORTING STUDENTS PROGRESS AND REPORT CARD GRADE
NO
TEACHER ASSIGNS A DIFFERENT TECHNIQUE OF LEARNING
STUDENT IS TESTED AFTER EACH CONCEPT STUDIED, AND THE TEACHER AND STUDENT CHECK TO SEE IF THE STUDENT IS LEARNING AND PROGRESSING ACCORDING TO CONTRACT
NO
STUDENT CONTINUES TO WORK
YES
HAS STUDENT FULFILLED CONTRACT?
NO
YES
GO TO START

Individualization of instruction was carried out as far as was feasible at each site. Its implementation, however, was hindered by hiring procedures. Many of the paraprofessional positions were not filled (as many as 6 positions for aides were empty at once during the year).

Staff Development

According to the project director, 15 workshops were offered, both on-site and centrally. Title VII, tax levy and Title I funded personnel participated. Program staff members, particularly the instructional aides, were expected to complete appropriate college courses. College credit was also given for student teaching.

Supportive Services to Students

Services were offered to target students, and to other bilingual students on a limited basis. Generally, the services of a grade advisor were available to Tilden students, and a family assistant was available to students at each site.

Project ECO also worked with the existing Haitian Club at Tilden and the club at John F. Kennedy, planning activities and speakers. ECO personnel worked to establish a similar club at Andrew Jackson High School. Club activities included trips, guest speakers and cultural events for students.

The family assistants were available to students who were experiencing difficulties unrelated to academic progress.

Services To Parents

Each site had a family assistant who established contact with each student's parents through telephone calls and home visits.

Assessment Procedures and Findings

The following section presents the assessment instruments and procedures, and the results of the testing.

Assessment Procedures and Instruments. Students were assessed in English language development, growth in their mastery of their native language, mathematics, social studies and science. The following are the areas assessed and the instruments used:

English as a Second Language	--	Criterion Referenced English Syntax Test (CREST), Levels I, II, III
Reading in English	--	Criterion Referenced English Syntax Test (CREST), Levels I, II, III
Reading in French	--	Teacher-made Tests
Mathematics Performance	--	Teacher-made Tests
Science Performance	--	Teacher-made Tests
Social Studies Performance	--	Teacher-made Tests
Native Language Arts Performance	--	Teacher-made Tests
Attitude Toward Native Culture	--	Program Developed Scale
Attitude Toward Education	--	Program Developed Scale
Attendance	--	School and Program records

The following analyses were performed:

A) On pre/post tests of English and native language reading achievement statistical and educational significance are reported:

1) Statistical Significance was determined through the application of the correlated t-test model. This statistical analysis demonstrates whether the difference between pre-test and post-test mean scores is larger than would be expected by chance variation alone; i.e. is statistically significant.

This analysis does not represent an estimate of how students would have performed in the absence of the program. No such estimate could be made because of the inapplicability of test norms for this population, and the unavailability of an appropriate comparison group.

2) Educational Significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen.[1]

An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size indices are recommended by Cohen as guides to interpreting educational significance (ES):

a difference of 1/5 = .20 = small ES

a difference of 1/2 = .50 = medium ES

a difference of 4/5 = .80 = large ES

---

[1] Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977 Chapter 2.

B) On the Criterion Referenced English Syntax Test (CREST) information is provided on the number of objectives attempted and mastered, the percentage of objectives mastered versus those attempted, and number of objectives mastered per month of treatment. Information is also provided on student performance on the various test levels. For ESL Title I students, mastery rates are reported by semester for two units of instruction times: by day and by month. Instruction (treatment) time is defined as the period of classroom instruction that occurred between pre- and post-testing which is conducted each semester. The maximum treatment time, as defined, is 63 days or 3.2 months (assuming that 20 days comprise one month, on the average). Due to reporting inaccuracies, CREST results for non-Title I students tested were treated as a norm referenced achievement test. To measure achievement for these data, correlated t-tests were computed.

C) The results of the criterion referenced tests in mathematics, social studies, science and native language arts, and measures of attitude toward education and students' native culture are reported in terms of the number and percent of students achieving the criterion levels set for the participants (80% passing).

D) Information is provided on the attendance rate of students participating in the bilingual program, compared with that of the total school population.

The following pages present student achievement in tabular form.

TABLE V

English as a Second Language

French/Creole Speaking Students

Fall

Results of the Criterion Referenced English Syntax Test (CREST)
Reporting the Number of Objectives Mastered, Percent Mastered,
and Objectives Mastered Per Day and Per Month.

(Title I)

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Days of Treatment*	Average Months of Treatment*	Objectives Mastered Per Day	Objectives Mastered Per Month
9	3	11.67	4.33	37%	62.33	3.12	.07	1.4
10	8	11.63	5.00	43%	59.75	2.99	.08	1.6
11	19	5.53	2.47	45%	57.84	2.89	.04	.85
Totals	30	7.8	3.3	43%	58.80	2.94	.06	1.12

*Instructional time between pre- and post-testing.

Fall CREST results for French/Creole speaking students revealed for the total sample that 3.3 of 7.7 objectives were mastered (43%), and 1.2 objectives were mastered per month of instruction. The number of objectives mastered per month of instruction ranged from .8 (grade 11) to 1.6 (grade 10). Overall, students showed achievement in English acquisition at a greater than expected rate.

TABLE VI

English as a Second Language

French/Creole Speaking Students

Fall

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

(Title I)

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	3	29	8	28%	6	5	83%	—	—	—
10	8	53	17	32%	40	23	58%	—	—	—
11	19	38	14	37%	20	9	45%	47	24	51%
Totals	30	120	39	33%	66	37	56%	47	24	51%

The Fall test by grade level crosstabulation of CREST results for French/Creole speaking students revealed that most students functioned at the lower test levels. Mastery rates were very variable, and generally higher at upper test levels.

TABLE VII

English as a Second Language

Spanish Speaking Students

Fall

Results of the Criterion Referenced English Syntax Test (CREST)
Reporting the Number of Objectives Mastered, Percent Mastered,
and Objectives Mastered Per Day and Per Month.

(Title I)

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Days of Treatment*	Average Months of Treatment*	Objectives Mastered Per Day	Objectives Mastered Per Month
9	37	8.65	4.35	50%	58.30	2.91	.07	1.4
10	84	8.25	4.25	52%	59.00	2.95	.07	1.4
Totals	121	8.37	4.28	51%	58.79	2.94	.07	1.4

*Instructional time between pre- and post-testing.

Fall CREST results regardless of test level for Spanish speaking students revealed for the total group that 4.28 of 8.37 objectives were mastered (51% mastery rate). For every 4 weeks of instruction, students mastered 1.4 objectives. No real differences are evident between 9th and 10th grades. Students showed better than expected English language growth.

TABLE VIII

English as a Second Language

Spanish Speaking Students

Fall

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

(Title I)

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	37	238	108	45%	63	42	67%	19	11	58%
10	84	287	170	59%	381	180	47%	25	7	28%
Totals	121	525	278	53%	444	222	50%	44	18	41%

The Fall test level by grade level crosstabulation for Spanish speaking students revealed that students in each grade level functioned primarily at the lower test levels. Mastery rates ranged from 28% for 10th graders on level III to 67% for 9th graders on level II.

TABLE IX

English as a Second Language

French/Creole Speaking Students

Spring

Results of the Criterion Referenced English Syntax Test (CREST)
Reporting the Number of Objectives Mastered, Percent Mastered,
and Objectives Mastered Per Day and Per Month.

(Title I)

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Days of Treatment*	Average Months of Treatment*	Objectives Mastered Per Day	Objectives Mastered Per Month
9	3	8.0	3.7	46%	61.67	3.08	.06	1.2
10	9	7.8	3.4	44%	56.11	2.81	.06	1.2
11	12	5.1	1.6	31%	54.67	2.73	.03	0.6
Totals	24	6.5	2.5	39%	56.08	2.80	.05	1.0

*Instructional time between pre- and post-testing.

Spring CREST results for French/Creole speaking students regardless of test level for the total group revealed that 2.5 of 6.5 (39%) objectives were mastered, and 1.0 objectives was mastered per month of treatment on the average. The number of objectives mastered per month of treatment was .6 (grade 11) and 1.2 (grades 9 and 10) objectives. Overall, students demonstrated expected rates of growth in English acquisition.

TABLE X

English as a Second Language

French/Creole Speaking Students

Spring

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

(Title I)

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	3	20	9	45%	—	—	—	4	2	50%
10	9	45	19	42%	8	4	50%	17	8	47%
11	12	29	7	24%	—	—	—	32	12	38%
Totals	24	94	35	37%	8	4	50%	53	22	42%

In Spring, 9th and 10th graders increased their functioning to levels II and III. Approximately the same mastery rates were observed in Spring as in Fall.

TABLE XI

English as a Second Language

Spanish Speaking Students

Spring

Results of the Criterion Referenced English Syntax Test (CREST)
Reporting the Number of Objectives Mastered, Percent Mastered,
and Objectives Mastered Per Day and Per Month.

(Title I)

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Days of Treatment*	Average Months of Treatment*	Objectives Mastered Per Day	Objectives Mastered Per Month
9	36	9.28	4.25	46%	57.56	2.88	.07	1.4
10	74	8.80	5.55	63%	57.81	2.89	.10	2.0
Totals	110	8.95	5.13	57%	57.73	2.89	.09	1.8

*Instructional time between pre- and post-testing.

Spring results for Spanish speaking students revealed an increase in the rate of growth (mastery of attempted objectives and mastery per month of treatment) as compared to Fall results. Thus, students continued to show good English language acquisition.

TABLE XII

English as a Second Language

Spanish Speaking Students

Spring

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

(Title I)

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	36	273	113	41%	52	34	65%	9	6	67%
10	74	309	197	64%	306	186	61%	36	28	78%
Totals	110	582	310	53%	358	220	61%	45	34	76%

Approximately the same results are evident for Spanish speaking students in Spring as in Fall. Students continued to function primarily at the lower two test levels. An increase in the percent of objectives mastered is seen for Spring results as compared to Fall results.

TABLE XIII

English Language Achievement

French/Creole Speaking Students

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in English Language Achievement of Students with Full Instructional Treatment on the Criterion Referenced English Syntax Test, Level I, II, III

(Non Title I)

Grade	Level	N	Pre-test Mean	Pre-test Standard Deviation	Post-test Mean	Post-test Standard Deviation	Mean Difference	Corr. Pre/post	t	P	ES
9	I	2	35.5	9.2	60.5	3.5	25.0	1.00	*	*	*
10	I	18	53.9	15.5	64.7	26.4	10.8	.07	1.59	NS	.36
	II	10	84.8	6.9	90.9	7.5	6.1	.76	3.05	.01	.97
	III	7	52.4	25.7	46.4	17.4	-6.0	.68	.84	NS	--
11	I	5	50.4	16.1	60.0	21.6	9.6	.81	1.68	NS	.75
	II	5	65.8	22.1	72.6	21.4	6.8	1.00	21.72	.001	9.71
	III	11	40.1	8.7	44.3	7.1	3.2	.73	1.77	NS	.53
12	III	4	46.8	4.4	46.6	4.8	-.2	.93	.16	NS	--

*insufficient data

Table XIII presents achievement data for non Title I French/Creole speaking students on the CREST by grade and test level.

A large gain (25 raw score points) was made by 9th graders, but insufficent data for 9th graders made computation of inferential statistics meaningless.

TABLE XIII
(continued)

Among 10th graders, only students tested on level II showed a statistically significant increase from pre- to post-test; in addition the gain of 6.1 points was judged to be of large educational significance. Students tested with level I made a gain of 8.7 points, a result judged to be of small educational significance. The pre-post correlation for students tested with level I was 0.07 implying that no systematic linear relationship existed between pre- and post-test results. The dramatic change in the rank ordering of individuals is most likely a result of the small pre-test standard deviation and very large post-test standard deviation; i.e., inadequate score spread at pre-test resulted in inadequate differentiation in the function tested. Students tested with level III showed a nonsignificant decline in test performance. What can be said with respect to students tested with this level is that their knowledge of English syntax was the same at post-test as at pre-test. One must consider the small sample size in judging program impact upon student achievement for students tested with level III.

Eleventh grade students tested with level II showed a statistically significant increase in test performance on post-test compared with pre-test; the t-test value is astronomically high ($t=21.71$, p far less than .001), and the ES value indicates that post-test achievement was almost <u>10 standard deviations above</u> their pre-test achievement. In addition the pre-post correlation was a perfect +1.0.

TABLE XIII
(continued)

Eleventh grade students tested on levels I and III showed achievement gains that were judged to be of moderate significance in educational terms.

Twelfth graders showed an insignificant decline in test performance, but little trust can be placed in any generalizations about project impact due to the small sample size (n=4).

It should be noted that the description and inferential statistics reported on Table XIII are based on very small sample sizes for several comparsions made. Therefore, caution should be used in drawing conclusions about project impact upon student achievement for these statistical outcomes.

TABLE XIV

Native Language Reading Achievement

French/Creole Speaking Students

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in Native Language Reading Achievement of Students with Full Instructional Treatment on Teacher-made Tests

(Andrew Jackson High School)

Grade	N	Pre-test Mean	Pre-test Standard Deviation	Post-test Mean	Post-test Standard Deviation	Mean Difference	Corr. Pre/post	t	P	ES
9	4	67.3	9.9	73.3	10.7	6.0	.65	1.39	NS	.69
10	8	68.8	13.1	75.6	10.0	6.8	.51	1.65	NS	.58
11	14	66.3	19.2	73.4	14.9	7.1	.77	2.19	.05	.59
12	---------- NO DATA ----------									

Table XIV presents achievement data for French/Creole speaking students at Andrew Jackson High School on teacher-made tests of native language reading achievement. Students in grades 9 and 10 showed raw score gains of 6.0 and 6.8 raw score points, respectively, while 11th grade students showed a gain of 7.1 raw score points. The gain for students in grade 11 was statistically significant at the .05 significance level.

Students in grades 9 and 10 did not make gains that reached statistical significance at the .05 probability level. The gains for students in grades 9, 10 and 11, when expressed in standard deviation units, were judged to be of moderate educational significance.

Thus, students in grade 11 showed statistically and educationally significant gains while 9th and 10th grades made educationally significant growth in native language reading achievement on teacher-made tests.

TABLE XV

Native Language Reading Achievement

French/Creole Speaking Students

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in Native Language Reading Achievement of Students with Full Instructional Treatment on Teacher-made Tests

(Samuel J. Tilden High School)

Grade	N	Pre-test Mean	Pre-test Standard Deviation	Post-test Mean	Post-test Standard Deviation	Mean Difference	Corr. Pre/post	t	P	ES
9	6	49.2	19.5	72.3	12.0	23.1	.34	2.98	.05	1.22
10	43	75.5	17.3	81.4	13.8	5.9	.59	2.66	.01	.41
11	24	78.0	15.7	80.7	12.7	2.7	.52	.92	NS	.18
12	9	81.9	9.9	87.4	10.4	5.5	.83	2.80	.05	.93

Table XV presents achievement data for French/Creole speaking students at Samuel J. Tilden High School on teacher-made tests of native language reading achievement. Ninth grade students made a statistically significant gain that was highly significant educationally.

Tenth graders made a statistically and educationally significant gain.

Eleventh graders failed to show a gain that was statistically or educationally significant.

Twelfth grade students demonstrated growth that was statistically significant and highly significant educationally.

The low pre-post correlation for students in grades 9 (especially), 10 and 11 suggests the need for an appraisal of reliability of these teacher-made tests.

TABLE XVI

Mathematics Achievement

French/Creole Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Mathematics

(Andrew Jackson High School)

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	6	1	17%	4	3	75%
10	15	5	33%	13	8	62%
11	33	16	49%	13	9	69%
12	4	1	25%	2	2	100%

In the Fall term, the percentage of French/Creole speaking students at Andrew Jackson High School passing teacher-made examinations in mathematics ranged from 17% in grade 9 to 49% in grade 11. In Spring, the percent mastering the curriculum ranged from 62% in grade 10 to 100% in grade 12. Overall, the stated evaluation objective for mathematics was not met. Only students in grade 12 (Spring) reached the criterion level (80% pass rate).

TABLE XVII

Mathematics Achievement

French/Creole Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Mathematics

(Samuel J. Tilden High School)

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	5	1	20%	7	7	100%
10	35	20	57%	44	21	48%
11	34	25	64%	35	27	78%
12	13	12	92%	7	4	57%

In the Fall term, the percentage of French/Creole speaking students at Samuel J. Tilden High School passing teacher-made examinations in mathematics ranged from 20% in grade 9 to 92% in grade 12. In Spring, the percent mastering the curriculum ranged from 48% in grade 10 to 100% in grade 9. The stated evaluation objective for mathematics was met and substantially surpassed in grade 9 (Spring) and grade 12 (Fall). Students in all other grades failed to reach the criterion level (80% pass rate).

TABLE XVIII

Mathematics Achievement

Spanish Speaking Students

Number and Percent of Students Passing Teacher-Made Examinations in Mathematics

(John F. Kennedy High School)

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	40	32	80%	40	28	70%
10	79	62	79%	79	54	68%

In the Fall term, the percentage of Spanish speaking students at John F. Kennedy High School passing teacher-made examinations in mathematics was 79% in grade 10 and 80% in grade 9. In Spring, the percent mastering the curriculum was 68% in grade 10 and 70% in grade 9. The stated evaluation objective for mathematics was met in grade 9 (Fall). Students in all other grades failed to reach the criterion level (80% pass rate). Tenth graders in Fall failed to reach criterion by only 1 percentage point.

TABLE XIX

Science Achievement

French/Creole Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Science

(Andrew Jackson High School)

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	2	0	0%	1	0	0%
10	7	2	29%	10	2	20%
11	11	2	18%	20	7	35%
12	2	0	0%	2	0	0%

In the Fall term, the percentage of French/Creole speaking students at Andrew Jackson High School passing teacher-made examinations in science ranged from 0% in grades 9 and 12 to 29% in grade 10. In Spring, the percent mastering the curriculum ranged from 0% in grades 9 and 12 to 35% in grade 11. The stated evaluation objective for science was not met in any grade (Fall and Spring).

TABLE XX

Science Achievement

French/Creole Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Science

(Samuel J. Tilden High School)

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	5	1	20%	5	3	60%
10	35	20	57%	44	21	48%
11	31	25	81%	33	24	73%
12	12	10	83%	9	1	11%

In the Fall term, the percentage of French/Creole speaking students at Samuel J. Tilden High School passing teacher-made examinations in science ranged from 20% in grade 9 to 83% in grade 12. In Spring, the percent mastering the curriculum ranged from 11% in grade 12 to 73% in grade 11. The stated evaluation objective for science was met in grades 11 and 12 (Fall). Students in all other grades failed to reach the criterion level (80% pass rate).

TABLE XXI

Science Achievement

Spanish Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Science

(John F. Kennedy)

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	20	17	85%	20	14	70%
10	41	36	88%	55	35	64%

In the Fall term, the percentage of Spanish speaking students at John F. Kennedy High School passing teacher-made examinations in science was 85% in grade 9 and 88% in grade 10. In Spring, the percent mastering the curriculum was 70% in grade 9 and 64% in grade 10. Overall, the stated evaluation objective for science was met and substantially surpassed in Fall. Students in Spring failed to reach the criterion level (80% pass rate).

TABLE XXII

Social Studies Achievement

French/Creole Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Social Studies

(Andrew Jackson High School)

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	3	1	33%	3	0	0%
10	4	0	0%	8	0	0%
11	11	2	18%	3	0	0%
12	2	2	100%	1	0	0%

In the Fall term, the percentage of French/Creole speaking students at Andrew Jackson High School passing teacher-made examinations in social studies ranged from 0% in grade 10 to 100% in grade 12. In Spring, the percent mastering the curriculum was 0% in all grades. The stated evaluation objective for social studies was met only in grade 12 (Fall).

TABLE XXIII

Social Studies Achievement

French/Creole Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Social Studies

(Samuel J. Tilden High School)

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	3	0	0%	7	3	57%
10	39	26	67%	45	32	71%
11	33	25	18%	34	25	74%
12	16	14	88%	11	3	27%

In the Fall term, the percentage of French/Creole speaking students at Samuel J. Tilden High School passing teacher-made examinations in social studies ranged from 0% in grade 9 to 88% in grade 12. In Spring, the percent mastering the curriculum ranged from 27% in grade 1[illegible] to 74% in grade 11. The stated evaluation objective for social studies was met only in grade 12 (Fall). Students in all other grades failed to reach the criterion level (80% pass rate).

TABLE XXIV

Social Studies Achievement

Spanish Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Social Studies

(John F. Kennedy High School)

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	40	24	60%	35	26	74%
10	83	58	70%	91	73	80%

In the Fall term, the percentage of Spanish speaking students at John F. Kennedy High School passing teacher-made examinations in social studies was 60% in grade 9 and 70% in grade 10. In Spring, the percent mastering the curriculum was 74% in grade 9 and 80% in grade 10. The stated evaluation objective for social studies was met only in grade 10 (Spring). Students in all other grades failed to reach the criterion level (80% pass rate).

TABLE XXV

Native Language Arts Achievement

Spanish Speaking Students

Number and Percent of Students Passing Teacher-made Examinations in Native Language Arts

(John F. Kennedy High School)

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	31	22	71%	22	20	91%
10	86	77	90%	48	44	92%

In the Fall term, the percentage of Spanish speaking students at John F. Kennedy High School passing teacher-made examinations in native language arts was 71% in grade 9 and 90% in grade 10. In Spring, the percent mastering the curriculum was 91% in grade 9 and 92% in grade 10. Overall, the stated evaluation objective for native language arts was met and substantially surpassed in grades 9 (Spring) and 10 (Fall and Spring).

TABLE XXVI

Attitude Towards Native Culture

French/Creole Speaking Students

Number and Percent of Students Showing Improvement in Attitude Towards Native Culture on a Program-Development Scale

(Andrew Jackson High School)

	SPRING 1980		
Grade	N	Number Improving	Percent Improving
9	5	2	40%
10	18	6	33%
11	24	14	58%
12	3	1	33%

The percentage of French/Creole speaking students at Andrew Jackson High School showing improvement in attitude towards their native culture on a program-developed scale ranged from 33% in grades 10 and 12 to 58% in grade 11. Overall, the stated evaluation objective (80% improvement rate) was not met. It is suggested that the reliability and validity of this instrument be investigated. In addition, it is recommended that base line data be compared with post-instruction results for the scale.

TABLE XXVII

Attitude Towards Native Culture

French/Creole Speaking Students

Number and Percent of Students Showing Improvement in Attitude Towards Native Culture on a Program-Developed Scale

(Samuel J. Tilden High School)

	SPRING 1980		
Grade	N	Number Improving	Percent Improving
9	7	2	29%
10	44	21	48%
11	30	8	27%
12	12	2	17%

The percentage of French/Creole speaking students at Samuel J. Tilden High School showing improvement in attitude towards their native culture on a program-developed scale ranged from 17% in grade 12 to 48% in grade 10. Overall, the stated evaluation objective (80% improvement rate) was not met. It is recommended that the reliability and validity of this instrument be investigated. In addition, it is recommended that base line data be compared with post-instruction results for the scale, to better ascertain growth in this domain.

TABLE XXVII

Attitude Towards Native Culture

Spanish Speaking Students

Number and Percent of Students Showing Improvement in Attitude Towards Native Culture on a Program-Developed Scale

(John F. Kennedy High School)

	SPRING 1980		
Grade	N	Number Improving	Percent Improving
9	38	35	92%
10	93	87	94%

The percentage of Spanish speaking students at John F. Kennedy High School showing improvement in attitude towards their native culture on a program-developed scale was 92% in grade 9 and 94% in grade 10. The stated evaluation objective (80% improvement rate) was met and substantially surpassed. Again, however, is recommended that the reliability and validity of this instrument be investigated. Also, student Spring outcomes should be compared to Fall base line data.

TABLE XXIX

Attitude Towards Education

French/Creole Speaking Students

Number and Percent of Students Showing Improvement in Attitude Towards Education on a Program-Developed Scale

(Andrew Jackson High School)

	SPRING 1980		
Grade	N	Number Improving	Percent Improving
9	5	1	20%
10	14	4	22%
11	24	4	17%
12	3	0	0%

The percentage of French/Creole speaking students at Andrew Jackson High School showing improvement in attitude towards education on a program-developed scale ranged from 0% in grade 12 to 22% in grade 10. Overall, the stated evaluation objective (80% increase) was not met. It is recommended that the reliability and validity of this instrument be investigated. Also, it is suggested that Spring results be compared with Fall base line data, to better ascertain growth in this area.

TABLE XXX

Attitude Towards Education

French/Creole Speaking Students

Number and Percent of Students Showing Improvement in Attitude Towards Education on a Program-Developed Scale

(Samuel J. Tilden High School)

	SPRING 1980		
Grade	N	Number Improving	Percent Improving
9	7	3	43%
10	45	23	51%
11	30	8	27%
12	12	2	17%

The percentage of French/Creole speaking students at Samuel J. Tilden High School showing improvement in attitude towards education on a program-developed scale ranged from 17% in grade 12 to 51% in grade 10. The stated evaluation objective (80% improvement rate) was not met. The reliability and validity of this instrument are in need of documentation. In addition, Spring results should be compared with Fall base line data.

TABLE XXXI

Attitude Towards Education

Spanish Speaking Students

Number and Percent of Students Showing Improvement in Attitude Towards Education on a Program-Developed Scale

(John F. Kennedy High School)

	SPRING 1980		
Grade	N	Number Improving	Percent Improving
9	38	34	90%
10	93	84	90%

The percentage of French/Creole speaking students at John F. Kennedy High School showing improvement in attitude towards education on a program-developed scale was 90% in grades 9 and 10. Overall, the stated evaluation objective (80% improvement rate) was met and substantially surpassed in each grade. As in previous cases, the reliability and validity of this instrument are in need of documentation. In addition, Spring results should be compared with Fall base line data.

TABLE XXXII

Attendance Rates

French/Creole Speaking Students

Number and Percent of Students Surpassing the General School Attendance Rate, Reporting the Program Attendance Rate and Standard Deviation

(Andrew Jackson High School)

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
9	5	96.8	1.9	4	80%
10	18	93.6	5.2	16	89%
11	24	94.1	4.3	18	75%
12	3	90.7	4.2	2	67%

The attendance rate for French/Creole speaking students at Andrew Jackson High School ranged from 91% (grade 12) to 97% (grade 9). Little variability is evident in any grade. The percent exceeding the school-wide rate ranged from 67% (grade 12) to 89% (grade 10). The stated evaluation objective was met and substantially surpassed. The attendance rates for program students were very high.

TABLE XXXIII

Attendance Rates

French/Creole Speaking Students

Number and Percent of Students Surpassing the General School Attendance Rate, Reporting the Program Attendance Rate and Standard Deviation

(Samuel J. Tilden High School)

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
9	7	90.1	20.0	6	86%
10	48	94.9	7.2	44	92%
11	33	92.1	10.8	28	85%
12	12	93.1	6.0	9	75%

The attendance rate for French/Creole speaking students at Samuel J. Tilden High School ranged from 90% in grade 9 to 95% in grade 10. The percent surpassing the school-wide rate ranged from 75% in grade 12 to 92% in grade 10. Thus, the stated evaluation objective for attendance was met and substantially surpassed. The program students' attendance rates were exceptionally high.

TABLE XXXIV

Attendance Rates

Spanish Speaking Students

Number and Percent of Students Surpassing the General School Attendance Rate, Reporting the Program Attendance Rate and Standard Deviation

(John F. Kennedy High School)

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
9	49	88.7	13.0	39	80%
10	104	89.3	14.6	86	83%

The attendance rate for Spanish speaking students at John F. Kennedy High School were 88% in grade 9 and 89% in grade 10. Eighty percent of 9th grade students surpassed the school-wide rate while 83% of the 10th grades surpassed the school-wide rate. The stated evaluation objective for attendance was met and substantially surpassed.

Evaluation Objectives and Summary of Student Outcomes

1. English Language: As a result of participating in the program, students will master an average of one instructional objective per four weeks of treatment.

   Outcome: a) French/Creole speaking students in Title I classes achieved average mastery rates of 1.2 and 1.0 objectives per month of treatment in Fall and Spring, respectively. The rates of achievement ranged from 0.6 (11th graders, Spring term) to 1.6 objectives per month (10th graders, Fall term).

   b) The outcomes on the CREST for non-Title I French/Creole speaking students were reported as the number of items answered correctly at pre and post test. The raw score gains reported were statistically significant in only 2 of the 8 groups reported. However, the small numbers of students reported make any interpretation of the outcomes questionable.

   c) Spanish speaking students in Title I classes showed good rates of growth, averaging 1.4 and 1.8 objectives mastered per month of treatment in the Fall and Spring, respectively. These rates substantially exceeded the program's criterion level.

2. Reading in the Native Language: As a result of participating in the program, students will demonstrate a significant increase in reading achievement in the native language.

   Outcome: a) Haitian students at Andrew Jackson in grades 9,10, and 11 scored gains on teacher-made tests which, while not statistically significant, were of moderate educational significance. Only small numbers of students were reported, however.

b) Students at Tilden achieved gains on staff-developed tests of reading in French which were statistically significant at or below the .05 level in grades 9,10, and 12. These results were from moderate to high educational significance.

c) No pre-post achievement data in reading in the native language were submitted for the Spanish speaking students. Their rates of passing courses in native language arts (NLA) are reported along with performance in the other content areas.

3. Content Area Performance: As a result of participating in the program, 80% of the students will achieve a passing grade in the subject areas of mathematics, science, social studies (and native language arts).

Outcomes: a) At Andrew Jackson, fairly small numbers of students were reported as taking content areas courses, and so the outcomes may be unreliable due to small sample size.

In mathematics, only 12th graders in the spring term exceeded the criterion level, although the 9th graders in the same term came close to attaining it with a 75% pass rate.

In science, the numbers of students reported were very small, ranging from 1 to 20. The percentage of students passing science ranged from 0 to 35. Thus, the program's objective was not met in this area.

In social studies, the number of students reported was a total of 20 in Fall and 15 in Spring. Their rates of passing ranged from 0 to 100%, with the criterion level being achieved only by 12th graders in the Fall term.

b) At Samuel J. Tilden, the numbers of students reported in each subject area are larger, ranging from 83 to 97.

In mathematics, the criterion level of 80% passing was met by 12th graders (Fall term) and 9th graders (Spring term), while 11th graders in the Spring nearly achieved the criterion.

In science, the percentages of students passing courses ranged from 11% to 83%, with 11th and 12th grade students in the Fall term exceeding the criterion level. Eleventh graders in the Spring term came close to meeting the criterion.

In social studies, the percentages of students passing courses ranged from 0 to 88. Twelfth grade students surpassed the criterion level in the Fall, while 11th graders (Fall and Spring terms) came close to achieving it.

c) At John F. Kennedy, the numbers of students reported as taking content areas courses ranged from 61 (science) to 123 (social studies). Data were reported for 9th and 10th graders only.

In mathematics, achievement ranged from 68% to 80% passing, with 9th graders in the Fall meeting the criterion level and 10th graders (Fall term) nearly achieving it. In other words, half the groups reported met the criterion.

In science, Fall term 9th and 10th graders exceeded the criterion level with passing rates of 85% and 88% respectively. Spring term students achieved rates of 64% and 70%.

In social studies, rates of passing ranged from 60% (9th graders, Fall term) to 80% (10th graders, Spring term). Only the latter group met the criterion level.

In native language arts, the students achieved rates of passing ranging from 71% (9th graders, Fall term) to 92% (10th graders, Spring term). Three out of the four groups of students had passing rates in excess of 90%, far exceeding the criterion level.

4. Attitudes Toward Cultural Heritage: As a result of participation in the program, 80% of the students will improve at least one scale unit on a 5 point scale measuring attitudes toward their cultural heritage.

Outcomes: a) At Andrew Jackson, the numbers of students reported ranged from 3 (12th grade) to 24 (11th grade), for a total of 50 students. The percent of students mastering the criterion ranged from 33 to 58. Thus, the criterion was not met at this site.

b) At Tilden, a total of 93 students were reported, with numbers ranging from 12 (12th graders) to 44 (10th graders). The percentages of students ranged from 17% (12th grade) to 48% (10th grade). None of the groups of students reported achieved the 80% criterion level.

c) At John F. Kennedy, 101 students were assessed as to new attitudes toward their cultural heritage. Both 9th and 10th graders surpassed the criterion level, achieving 92% and 94% passing rates respectively. A copy of the questionnaire is attached as Appendix A (see Recommendations for discussion).

5. Attitudes Toward School: As a result of participating in the program, 80% of the students will improve at least one scale unit on a 5-point scale of attitudes toward school (measuring interest in continuing education beyond the 11th grade).

Outcomes: a) At Andrew Jackson, outcomes are reported for 46 students, resulting in small groups in each grade level. The percentage of students improving one scale level ranged from 0 (12th grade) to 22% (10th grade). Thus, the objective for growth in this area was not achieved.

b) At Samuel Tilden, 94 students are reported as having been given the attitude scale. The number of students per grade ranged from 7 (9th graders) to 45 (10th graders). The percentage of students mastering the objective ranged from 17% at the 12th grade to 51% at the 10th grade. Tilden students as a whole did not meet the program's objective in this domain.

c) The results at John F. Kennedy show a different pattern. Of the 131 students who were administered the attitude scale, 90% were reported as having improved one scale level, thus surpassing the 80% criterion. A sample questionnaire is attached as Appendix A (see Recommendations for discussion).

6. Staff Observation of Student Behavior: Staff members were asked to rate the frequency with which certain "desirable student behaviors" were observed in September - October and in April - May. Eight behaviors, including "interest in learning," "respect for school rules," "pride in native culture" and "pride in American culture" were evaluated (see Appendix B for a sample copy of a questionnaire).

Outcomes: Staff members at all 3 sites observed a greater incidence of positive behaviors at the end of the year than in the Fall. The average increase observed from pre- to post-test is reported for each site, as follows:

TABLE XXXV

Average Difference Between Initial and Final Ratings

Of Student Behavior.

High School	Number Of Teachers	Average Difference Initial - Final
Andrew Jackson	11	3.3
Samuel J. Tilden	13	5.5
John F. Kennedy	10	6.9

The range of increases ranged from 3.3 at Jackson to 6.9 at Kennedy. See the recommendations for a discussion of issues raised by the questionnaires.

7. Attendance: As a result of participation in the program, the attendance rate of bilingual students will be greater than that of mainstream students.

Outcomes: a) At Andrew Jackson, the average attendance rates reported ranged from almost 91% to nearly 97%. Although the numbers reported were small, the percentages of students exceeding the schoolwide rate ranged from 67% to 81%.

b) Samuel J. Tilden High School bilingual students also had high attendance rates, ranging from 90 to 95%. The percentage of students exceeding the schoolwide rate ranged from 75% to 92%.

c) The 153 students reported at John F. Kennedy had attendance rates which averaged around 89% in both grades 9 and 10. Of all the students reported over 80% exceeded the schoolwide rate.

In all three sites, Project ECO students exceeded the criterion for success in this area.

Conclusions and Recommendations

This evaluation was of the first year of Project ECO. Typical of most first year projects, much of the time was spent on hiring new staff, planning and phasing in the program. Progress was hampered somewhat by the fact that the funding cycle did not begin until after the academic year had begun.

One of the difficulties in assessing the effectiveness of this project lies in the fact that it was designed to be superimposed upon already existing basic components. A second difficulty lay in a dearth of records and recommendation of program activities. The general school staffs were positive about the improved quality of services to students allowed by involvement with Project ECO site staff. However it was difficult to assess what Project ECO's unique contributions were in addressing their goals toward enhancing career opportunities. It is strongly recommended that next year's evaluation focus on those goals related to career development and opportunities.

It must be noted that many students, especially the Haitians, were reported as achieving at low levels even when the programs' high criterion level was disregarded. It will be important during 1980-81 to focus both program and evaluation efforts on better identifying student characteristics and the kinds of instructional services which they receive. As the atttendance rates indicate, Project ECO students appear to be motivated, and attend school for a higher percentage of the time than do their monolingual peers. It remains, then, to look closely at those factors, program and non-program, which have contributed to the low levels of student achievement.

Based on interviews and site observations, Project ECO seems to have implemented its objectives through the following activities:

1) Increasing individualization through tutors and small group instruction;

2) Translating basic course materials from English into the target languages;

3) Developing materials for use in classrooms;

4) Writing lesson plans;

5) Cooperating with Language Clubs to provide guest speakers to enhance students' self esteem about knowing a foreign language and demonstrating the usefulness of a second language for career advancement.

Below are possible ways of better utilizing Project ECO's resources for future funding years:

1) Since Project ECO activities were carried on in the context of on-going programs more effort should be made to tailor Project ECO to the specific needs of each site. Specifically a needs assessment might be carried out at each site to determine areas in which new strategies could be most productive.

2) The program should seek to identify those factors which are contributing to low achievement rates among some of the Haitian students. Possible contributors may be lack of linguistically or academically appropriate materials, or staff members may lack competency in the target language. Course offerings may be on academic levels on which the target students do not yet function. An investigation of student characteristics should contribute to an understanding of this problem. A close look at the design of the program should be important as well.

3) Where possible, curriculum and materials development by Project ECO should cohere with student areas of need as determined in activity 2, while not disregarding the project's areas of focus.

4) The program staff is urged to keep better documentation of student characteristics, student achievement, and as well as non-instructional program activities, including staff training and curriculum development.

5) It is recommended that career information be disseminated across the sites, so that each may present a cluster of career options in which linguistic minorities are under-represented.

6) Interaction between central staff and on-site school staff could be improved by joint planning and training, understanding the protocol within each high school and the attributes of existing programs.

7) The central staff facility might be used for regularly scheduled meetings for site personnel. One topic to be addressed could be joint planning for career development and opportunities, such as identifying speakers, attending and discussing related professional conferences, and developing materials specific to identified career areas.

8) As the project director indicated, occasional visits to other sites by site staff would promote exchange of ideas.

9) The role of the grade advisor seemed to have been effective in one school. The possibility of including these in other schools should be explored.

10) In-service training of non-Title VII school staff working with bilingual students should be explored so that the innovative approaches of Project ECO can be continued after the Project ends. Particular emphasis should be on career education objectives.

11) The evaluation of the program in 1980-81 should focus on the way in which Project ECO has specifically addressed the career segment of the program.

12) In order to adequately assess student growth in future years, the program of testing and data collection should be implemented as proposed. For example, this should include pre and post test data on student achievement in reading in the native language for all language groups. It is also recommended that effort be made to report data for a larger percentage of the target population. If a comparison of bilingual students' drop-out rates is to be made with that of the total school population, these data will have to be collected by the program.

13) A criterion level of an 80% passing rate in the content areas is a laudable objective, and the program is encouraged to strive to meet it. Nevertheless, as the 80% level is higher than that commonly in use in other Title VII projects, Project ECO should not be penalized for having a higher criterion level.

It is recommended that a more reasonable level be selected for evaluation purposes.

14) It is suggested that the student and teacher attitude scales be reviewed. Reported performance on these scales varied from site to site, suggesting that criteria for mastery, or administration of the scales, may not have been uniform. The small number of scale items further undermines their usefulness as valid indicators of attitudinal change. Perhaps other types of comparisons would provide more reliable sources of data indicative of student attitudes. In addition to attendance and drop-out rates, the number of bilingual students applying to college or job training programs could be compared to their mainstream counterparts, or to the career plans of younger students beginning the program. A longitudinal data collection plan would be particularly helpful in this context.

15) In response to the generally low correlations of pre- and post-test scores on teacher-made tests of native language reading at Tilden, it is recommended that the adequacy of these tests be examined for this group of students, or for at least a subgroup of this population.

16) The thrust of many of these recommendations is towards a review of the program's objectives and the evaluation design as originally proposed. The design should reflect all areas of significant program activity, and pose reasonable criteria for the successful achievement of the objectives.

APPENDICES

APPENDIX

A

QUESTIONNAIRE OF STUDENT ATTITUDES TOWARD EDUCATION and CULTURE

New York City
Board of Education

442 E. Houston Street, Rm. 322
New York, New York 10002

Equal Career Opportunit
For Bilingual High Schoo
Students - Project ECO
ESEA - Title VII
Tel: (212) 477-9141

Frank J. Macchiarola
Chancellor of Schools

Nathan Quinones
Executive Director
Division of High Schools

Nancy J. Scott
Director, High School Projects
(212) 596-7748

Angelo G. Gatto
Project Director

Janine Anas
Assistant Director

CUESTIONARIO PARA EL ESTUDIANTE

Nombre _____ Escuela J. F. K

Clase Oficial 961 Fecha 6/12/80

Direcciones: Expresa tus opiniones sobre los asuntos indicados a continuación. Usa la escala que te damos a continuación para escoger el número que mejor representa tus opiniones. Indica tus opiniones principio del curso. (Sept- Oct)

5	4	3	2	1
Excelente	Bueno	Medio	Malo	Muy Malo

I. CONTINUACION DE LOS ESTUDIOS

	Principio	Final
a) Tu opinión acerca de continuar estudios en la Universidad	a) 2	3
b) Tu opinión acerca de continuar tus estudios en una escuela técnica	b) 2	3
c) Tu conocimiento del valor que tiene la continuacion de tus estudios	c) 3	4
d) La preparación para una carrera provechosa	d) 3	4
e) Tu conocimiento de las oportunidades que se obtienen a través de la educación	e) 3	4
	Total 13	18

New York City
Board of Education

442 E. Houston Street, Rm. 322
New York, New York 10002

Equal Career Opportuni
For Bilingual High Sch
Students - Project ECO
ESEA - Title VII
Tel: (212) 477-9141

Frank J. Macchiarola
Chancellor of Schools

Nathan Quinones
Executive Director
Division of High Schools

Nancy J. Scott
Director, High School Projects
(212) 596-7748
Angelo G. Gatto
Project Director

Janine Anas
Assistant Director

II.

ACTITUD CULTURAL

		Principio	Final
f)	Tus opiniones sobre la cultura hispana	f) 3	4
g)	Tus opiniones acerca de la cultura de los Estados Unidos	g) 1	3
h)	Tu relación con tus compañeros de tu propia cultura hispana	h) 3	4
i)	Tu relación con tus compañeros que hablan solamente inglés	i) 1	2
j)	Conocimiento de la cultura de los Estados Unidos	J) 1	3
k)	Conocimiento de la cultura hispana	k) 3	4
	Total	12	20

APPENDIX

B

STAFF QUESTIONNAIRE

New York City
Board of Education

442 E. Houston Street, Rm. 322
New York, New York 10002

Equal Career Opportuni
For Bilingual High Sch
Students - Project ECO
ESEA - Title VII
Tel: (212) 477-9141

Frank J. Macchiarola
Chancellor of Schools

Nathan Quinones
Executive Director
Division of High Schools

Nancy J. Scott
Director, High School Projects
(212) 596-7748

Angelo G. Gatto
Project Director

Janine Anas
Assistant Director

Name _____ School TILDEN

Position TEACHER OF FRENCH Date JUNE 11, 1980

STAFF QUESTIONNAIRE

Introduction: As a staff member your observations concerning the impact of the bilingual program would be highly desirable. We would be grateful to you for your help in completing the brief questionnaire shown below.

Directions: In your opinion please indicate how frequently you have observed the following desirable student behaviors among program participants in terms of the September-October period and April-May period of this school year. The scale shown should serve as a point of reference for making these ratings.

Please use numbers only.

SCALE

5	4	3	2	1
Always	Often	Sometimes	Rarely	Never

OBSERVED BEHAVIORS	PERIOD	
	Initial (Sept.-October)	Final (April-May)
A. Interest in learning	A. 4	A. 4
B. Cooperative spirit toward teachers	B. 3	B. 4
C. Cooperative spirit toward classmates.	C. 3	C. 3
D. Respect for school rules	D. 2	D. 3
E. Satisfactory attendance	E. 5	E. 2
F. Pride in native culture	F. 4	F. 5
G. Pride in American culture	G. 3	G. 3
H. Satisfactory Academic Achievement	H. 4	H. 4
TOTALS	28	~~34~~ 32
DIFFERENCE	3	

New York City
Board of Education

442 E. Houston Street, Rm. 322
New York, New York 10002

Equal Career Opportuniti
For Bilingual High Schoo
Students - Project ECO
ESEA - Title VII
Tel: (212) 477-9141

Frank J. Macchiarola
Chancellor of Schools

Nathan Quinones
Executive Director
Division of High Schools

Nancy J. Scott
Director, High School Projects
(212) 596-7748
Angelo G. Gatto
Project Director

Janine Anas
Assistant Director

STAFF QUESTIONNAIRE (CONT.)

In your opinion, please state what should be done to improve the program.

1. Materials: The reader that I used was quite old. It had no vocabulary or questions. I had to go through the entire book page by page and make vocabulary and question sheets.

2. Class size: Class was too large. For more effective teaching, class should number no larger than 15 students

3. Educational Assistants: I had no assistant this term. A para would have been helpful, especially with so large a class

4. Others: more and better reading material. The material need not be purely Haitian - our objective should be to broaden the horizon of the students, not to restrict them

Books or materials you would like to order:

1. Rhinoceros
2. Le Bourgeois Gentilhomme
3. Leure de Solsce Romantique